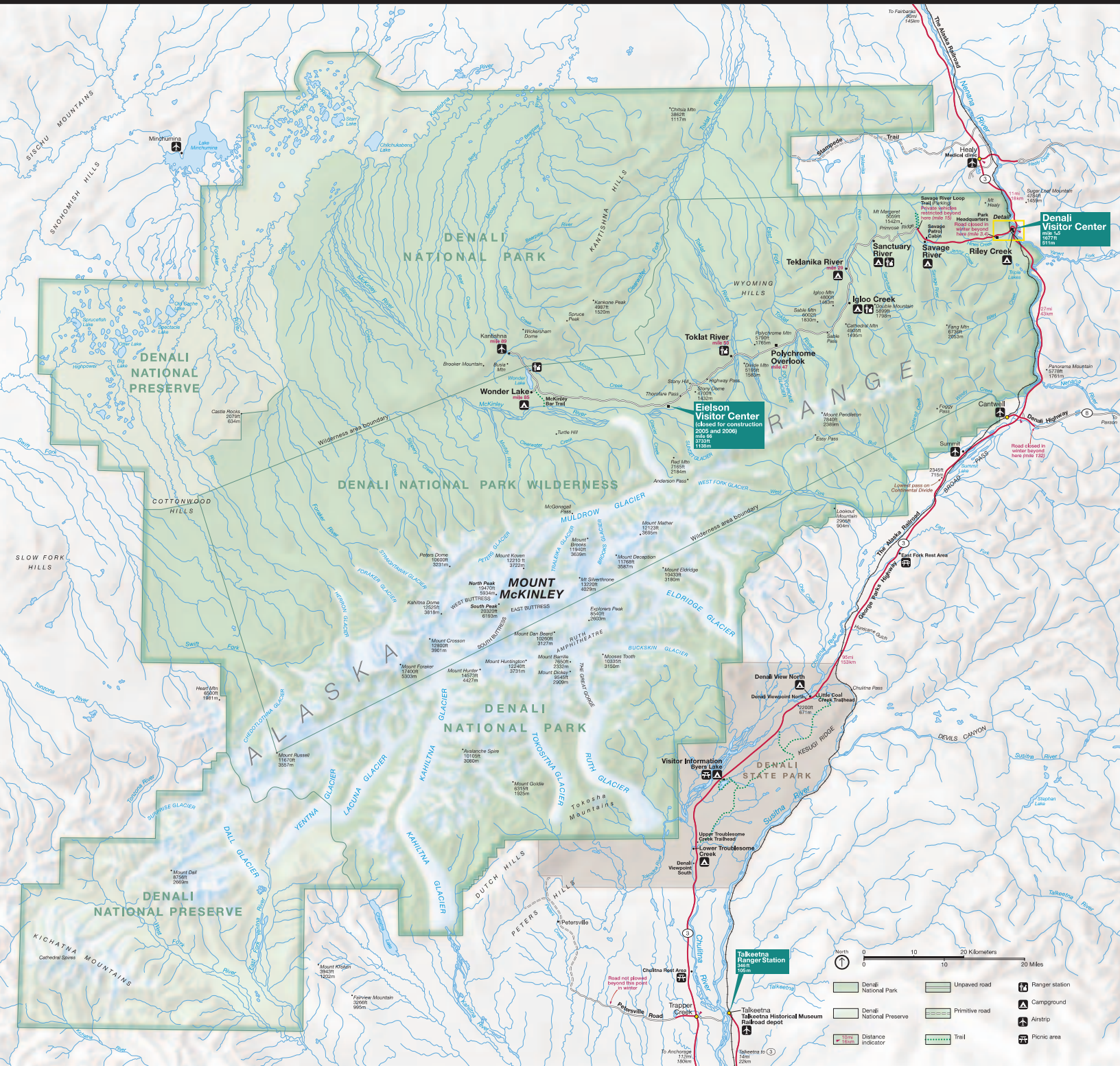


Denali National Park and Preserve

Annual Report 2006



Map of Denali National Park and Preserve



Denali National Park and Preserve encompasses more than six million acres on the north and south sides of the Alaska Range. Within this vast park is a single, primitive, 92-mile road. The park draws over 400,000 visitors annually, and is the most accessible of Alaska's national parks.

Most visitors come by train, bus or private vehicle during the months of June, July and August, but the park is open year-round. Access on the park road beyond the Savage River at Mile 15 is mainly by bus. Visitors are encouraged to make advance reservations for buses and campground during the summer. Wilderness permits are required for overnight travel in the backcountry, and they can be obtained in person up to the day before the trip.

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Cover Photos: Mt. McKinley with caribou - ©Tom Walker, Opening session of 2006 Alaska Park Science Symposium - NPS photo, Ranger and visitors in front of Denali Visitor Center - Chris Arend, Back Cover: Denali Visitor Center front desk - Chris Arend Photography. Photos are courtesy of the National Park Service unless otherwise noted. All other photos are being used with the permission of the photographer. Any other use without authorization is a violation of the copyright.



Tom Walker

Message From the Superintendent



Superintendent Paul Anderson pauses for a break during a March 2006 ski trip from Wonder Lake to park headquarters. The weather was clear during this trip, providing many outstanding views of "the mountain".

2006 was the 100th anniversary of the first visit to the region by wealthy, East Coast hunter-naturalist Charles Sheldon. He arrived in the summer of 1906 to hunt Dall sheep, and was so enthralled with the area and its wildlife that he decided to return the following year and spend the winter. Sheldon and future first park superintendent Harry Karstens built a rough cabin on the Toklat River, and it was from here that he based his explorations. Sheldon learned a great deal about this land and its wildlife, and he became alarmed about the large-scale hunting taking place to supply meat to miners, railroad camps and towns. He used his influence to gain support for the creation of the first national park in Alaska to protect the wildlife populations. Sheldon's vision came into being when the legislation to establish Mount McKinley National Park was signed on February 26, 1917.

Much has changed in the park since Sheldon's time here. Visitation and other types of park uses continue to increase, and we are working with a variety of organizations, state and federal agencies, private businesses, and members of the public to plan for and provide appropriate facilities and opportunities while continuing to protect park resources. The new Denali Visitor Center and its associated facilities were all open for the entire summer visitor season, and our visitors gave them, and us, high praise for these expanded services. Construction on the new Eielson Visitor Center began in earnest this summer. We plan to open that facility in 2008. We finalized the Backcountry Management Plan and the South Denali Implementation Plan, both of which were years in the making and the result of partnerships. These long-range planning documents provide direction for the expansion of appropriate recreational opportunities and the development of new visitor facilities in the 1980 park additions.

Research in the park continues to play an increasingly significant role in providing valuable information for park management decisions, and to the rest of the world on global issues such as climate change. We were honored to host the 2006 Alaska Park Science Symposium, which provided a forum for scientists and researchers from many disciplines to share the results of their work with each other, educators, and members of the public. We also completed the first full season of field work on the series of studies that are examining the impacts of traffic volume and patterns on the Denali Park Road. The studies address current and potential impacts to vegetation, wildlife, physical resources and the visitor experience. Data from this summer and from next year will be analyzed and used to inform the public on any changes that might be proposed to the current park road capacity and how it is used.

We are celebrating the 90th anniversary of the park's founding with a series of special events and activities in 2007. As we reflect upon the history of this incredible place, we are inspired by the visionaries of the past. I marvel at how far we have come, and I am excited about the possibilities for the future!

Thank you for your interest in Denali National Park and Preserve. Only by working together can we ensure that this special place is preserved intact, for our children and our grandchildren to use and enjoy.

Sincerely,

A handwritten signature in dark ink that reads "Paul R. Anderson".

Paul R. Anderson

Park Purpose

The purpose of Denali National Park and Preserve has evolved from the time Congress established the original Mount McKinley National Park to the present and has increased in complexity because of the different mandates that apply to the Old Park (the original Mount McKinley National Park), the national park additions (added by ANILCA), the national preserve (also added by ANILCA), and the designated wilderness (covering most of the Old Park).

Mount McKinley National Park (Old Park)

In 1917 Congress established Mount McKinley National Park as a “game refuge” to “set apart as a public park for the benefit and enjoyment of the people ... for recreation purposes by the public and for the preservation of animals, birds, and fish and for the preservation of the natural curiosities and scenic beauties thereof ...” (39 Stat. 938).

Denali National Park and Preserve

In 1980 Congress passed the Alaska National Interest Lands Conservation Act (ANILCA, 16 USC §§ 3101-3233, Pub. L. 96-487), which enlarged and renamed the park Denali National Park and Preserve. Section 101 of ANILCA describes the broad purposes of the new conservation system units throughout Alaska, including enlarged national parks and preserves such as Denali. These are the following:

- Preserve lands and waters for the benefit, use, education, and inspiration of present and future generations.

- Preserve unrivaled scenic and geological values associated with natural landscapes.
- Maintain sound populations of, and habitat for, wildlife species.
- Preserve extensive, unaltered ecosystems in their natural state.
- Protect resources related to subsistence needs.
- Protect historic and archeological sites.
- Preserve wilderness resource values and related recreational opportunities such as hiking, canoeing, fishing, and sport hunting.
- Maintain opportunities for scientific research in undisturbed ecosystems.
- Provide the opportunity for rural residents engaged in a subsistence way of life to continue to do so.

Section 202 stated that the Denali National Park and Preserve additions are to be managed for the following additional specific purposes:

- To protect and interpret the entire mountain massif and the additional scenic mountain peaks and formations.
- To protect habitat for, and populations of fish and wildlife, including, but not limited to, brown/grizzly bears, moose, caribou, Dall sheep, wolves, swans, and other waterfowl.
- To provide continued opportunities, including reasonable access, for mountain climbing, mountaineering, and other wilderness recreational activities.



The park is home to over 700 flowering plant species, including the purple mountain saxifrage.

Denali Wilderness

Section 701 of ANILCA designated the “Denali Wilderness of approximately one million nine hundred thousand acres” under the Wilderness Act as depicted on a map referenced in Section 202 of ANILCA and including 99% of the former Mt. McKinley National Park. According to the Wilderness Act, these lands are to be “administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness.”

Denali National Preserve

Section 1313 of ANILCA addresses the purpose of national preserves created by the act.

A National Preserve in Alaska shall be administered and managed as a unit of the National Park System in the same manner as a national park except as otherwise provided in this Act and except that the taking of fish and wildlife for sport purposes and subsistence uses, and trapping shall be allowed in a national preserve under applicable State and Federal law and regulation.

Significance of Denali National Park and Preserve

Large Protected Area. Denali National Park and Preserve encompasses a vast six million acre area, about the size of the state of New Hampshire. Most of the two million acres of the original park has been in protected status since 1917. This large size enables a spectacular array of flora and fauna to live together in a healthy natural ecosystem and provides excellent opportunities to study subarctic ecosystems in settings largely undisturbed by humans. Because of these values, the United Nations Man and the Biosphere Program designated the park and preserve to be an International Biosphere Reserve.

Mountains and Glaciers. The park contains a major portion of the Alaska Range, one of the great mountain uplifts in North America. The Alaska Range is dominated by North America's highest peak, Mount McKinley, with its summit at 20,320 feet above sea level. Towering 18,000 feet above the adjacent lowlands, the mountain's dramatic vertical relief rivals any other mountain in the world, exceeding the vertical relief of Mount Everest measured from base to summit. A number of large glaciers originate in the park's high mountains, including some of the largest in North America.

Wildlife and Habitat. The park was originally established in 1917 as a refuge for large mammals. Backcountry visitors and visitors traveling along the park road often observe Dall sheep, caribou, wolf, grizzly bear, moose, and fox. While populations fluctuate, nowhere else in America can such concentrations of these large species of wildlife be observed in as accessible a natural setting. The park is also significant for its diverse avian habitat that attracts birds from all over the world. The park's rich and varied

vegetation includes alpine tundra, shrub-scrub tundra, mixed spruce-birch and spruce-tamarack woodlands, taiga, wetlands, and extensive riparian and lowland forest areas. Denali has more than 10,000 mapped lakes. More than 753 species of flowering plants inhabit the slopes and valleys of the park.

Scenic Resources and Air Quality. Outstanding views of natural features, including mountains, glaciers, faults, and rivers dominate the park landscape. On a clear day, Mount McKinley can be seen from Anchorage, more than 130 air miles to the south. The exceptional air quality in Alaska and the lack of city lights near the park provide the conditions for outstanding daytime views year-round and excellent night sky visibility in fall, winter, and spring. Denali National Park and Preserve is a designated Class I airshed under the Clean Air Act Amendments.

Cultural Resources. There are 257 known cultural resource sites within Denali's boundaries, including both prehistoric and historic sites. Because cultural resource inventories have been limited to date, this number likely represents a small fraction of the park's total sites. Known resources include archeological and historic sites associated with Athabascan Indian groups, early explorers, mining history, and the early days of the park. Major prehistoric sites in the park include the Teklanika Archeological District, a property listed on the National Register of Historic Places. Many historic structures are in the park headquarters area, which is listed on the National Register of Historic Places as a district, and on the boundaries of the Denali Wilderness (along the original park boundary). These are mainly patrol cabins and other structures dating

back to early years of park management. Historic mining activity dates back to the early 1900s in the Kantishna Hills (which includes the national register-eligible Kantishna Historic District), the Stampede area, and the Dunkle Hills near Cantwell.

Mountaineering. Because it is the highest peak in North America, has a high northern latitude location, and is relatively accessible, Mount McKinley is considered one of the world's premier mountaineering destinations, drawing climbers from many countries. It is touted as one of the "seven summits of the world." Many other peaks in the park, including Mount Foraker, also offer outstanding expeditionary climbing opportunities.

Wilderness Recreation. Denali offers superlative opportunities for primitive wilderness recreation. Outstanding cross country hiking, backcountry camping, and winter touring possibilities are available for those willing to approach the area in its natural condition. This huge park contains large areas with almost no trails and where evidence of human use is minimal to nonexistent. These conditions are in contrast to most wilderness areas in the contiguous 48 states where maintained trails, designated campsites, footbridges, and signs are standard. These conditions also contrast with much of Alaska, where similar opportunities abound, but are very difficult to reach. A large portion of Denali's backcountry is readily accessible to visitors who can reach the park by either highway or railroad from either Anchorage or Fairbanks - Alaska's two largest cities and major connection points for out-of-state visitors.

PRESERVE PARK RESOURCES

Natural and cultural resources and associated values at Denali National Park and Preserve are protected, restored, and maintained in good condition and managed within their broader ecosystem and cultural context.

Wonder Lake, with Mount McKinley towering over it in the background, is a favorite destination for many park visitors. Visitors come to admire its beauty, try their luck at fishing for lake trout and grayling, or search for birds such as the common loon and arctic tern that nest along its edges during the summer.

Surface Water Quality

Long-Term Goal:

By September 30, 2008, 100% of the park's 12,130 lakes and ponds (68,663 acres) meet State (EPA approved) water quality standards.

Annual Goal:

By September 30, 2006, 100% of 12,130 lakes and ponds (68,663 acres) meet State (EPA approved) water quality standards. Data are derived from United States Geological Survey (USGS) hydrography data.

STATUS: GOAL ACHIEVED

The USGS began a three-year study of the limnology and water quality of Wonder Lake in order to better understand lake processes and ecosystem function. A complementary survey of the lakes in the northwestern portion of the park was initiated through the Inventory & Monitoring program to get baseline information. The Western Airborne Contaminants Assessment Project found trace

amounts of mercury, dieldrin (a poison originally used as an insecticide), and polychlorinated biphenyls (PCBs) have been found near Wonder Lake as a result of global-scale atmospheric transportation.

PCBs were utilized in hundreds of industrial and commercial applications, such as electrical equipment, surgical implants, paints, and pigments due to their non-flammability, chemical stability, high boiling point and electrical insulating properties. They were banned in the late 1970's due to their toxicity and persistence in the environment. The forthcoming final analysis will provide implications specific to Denali. A formal Water Resources Stewardship Strategy to guide the park toward effective, science-based water resources management was completed. This plan will be part of the forthcoming Resource Stewardship Strategy.



Wildlife Monitoring

Long-Term Goal:

By September 30, 2008, eight (14%) of 58 native Species of Management Concern (wolves, moose, golden eagles, caribou, trumpeter swans, grizzly bears, Dall sheep, peregrine falcons) will have improved information regarding their occurrence, distribution, and abundance in the park, subject to the availability of funding. Monitoring plans for additional species will be written, and two (3%) of the 58 species (wolves and grizzly bears) will be managed according to approved management plans.

Annual Goal:

By September 30, 2006, improved information on six of the Species of Management concern will be available.

STATUS: GOAL ACHIEVED

In FY 2006, the park obtained improved information about the distribution and abundance of wolves, caribou, moose, grizzly bears, peregrine falcons, and golden eagles from ongoing, long-term studies. Between February - April 2006 twenty-two wolves from twelve packs were captured and radio-collared to maintain the monitoring of the packs on the north side of the Alaska Range. The radio-collared wolves were documented at over 500 locations during the year from the air. Daily locations were obtained via satellite upload from nine wolves that wore collars with GPS (global positioning system) units. In April 2006 the density of wolves on the north side of the park was estimated at 6.7 wolves per 1000 square kilometers, a 50% increase from the previous year.



NPS biologists have used radio-collars to monitor Denali wolf packs since the mid-1980's.

The monitoring of the caribou herd continued, with a late September population estimate of 2,050 animals. In recent years the herd has remained relatively stable at approximately 2,000 animals. Moose surveys were conducted in November 2005 in the Cantwell and upper Yentna River areas in the southern part of the park. In the Cantwell area, 257 moose were

observed, for a density of 0.65 moose per square mile (0.25 moose per square kilometer). The number of moose counted in the Yentna area was 41, for a density of 0.06 moose per square mile (0.02 moose/square kilometer). These locations are utilized for subsistence moose harvest by local residents.



Tom Walker

In May 2006 four female grizzly bears were captured to change radio collars and four new female bears were captured and collared as part of the long-term monitoring of grizzly bears on the north side of the Alaska Range. The bears were located via the collars approximately twice per month between May and September to determine locations and cub productivity and survival. Cub mortality remains high at 65%, and mortality for yearlings is 40%. Adult females have an average mortality rate of 4% per year.

This was the 19th consecutive year for conducting standardized aerial surveys to monitor reproductive success of golden eagles and gyrfalcons in the park. Seventy-five golden eagle nesting territories were monitored this year, and of these 85% were occupied by pairs. 94% of the pairs produced clutches, making the 2006 production one of the highest ever. It was a different story for the gyrfalcons, whose nesting success was only mediocre. Seven nesting territories were occupied, but only three pairs produced chicks for a total of nine fledglings. Two new

peregrine falcon territories were documented in 2006, bringing the total number to seven.

Reproduction was successful at six of the sites, fledging a total of eight young birds.

Standardized counts for passerine, i.e. perching, birds were conducted at 211 sampling points in June 2006. Preliminary analysis of the survey data suggests that the abundance of most species is similar to the last four years. Two new species of birds, the ruddy duck and the mourning dove, were added to the Denali bird checklist this year.



Gyrfalcons are the largest falcon species in the world. They breed throughout the northern latitudes, including in Denali. Here they often utilize nests originally built by golden eagles or ravens.

Wildlife technician looking and listening for birds on Polychrome Mountain during June breeding bird survey

An estimated 300-350 grizzly bears roam within the park on the north side of the Alaska Range. The animals are mostly solitary, except for family groups such as a sow with cubs. Cubs remain with their mothers for two-three full years before they are chased away to begin life on their own.



Rick McIntyre

Historic Structures

Long-Term Goal:

By September 30, 2008, 53 of 143 (37%) of Denali National Park and Preserve historic structures on the current List of Classified Structures are in good condition.

Annual Goal:

By September 30, 2006, 48 of 131 (37%) of Denali National Park and Preserve historic structures on the current list of Classified Structures are in good condition.

STATUS: GOAL EXCEEDED

The Special Projects crew did a complete rehabilitation of the interior and exterior of “The Overthere”, built by park rangers and completed in 1928. It was used as a warehouse for over fifty years and in 1982 was refurbished as offices for the Division of Interpretation. The rehabilitation work included restoring windows and doors to the original configuration and a complete gutting of the building's interior. The existing first floor structural system was retained and reinforced. All new interior walls and a new second floor with interior partition walls was installed. The building also received a new heating and cooling system, along with fire detection and sprinkler systems. With the exception of the restroom, the building is Americans with Disabilities Act (ADA) compliant. For improved energy efficiency, this building is no longer on the central steam heating system during the winter.

The historic Lower East Fork ranger patrol cabin, built by rangers in 1930, was rehabilitated using locally-cut logs that had been felled the previous year and peeled at the site. Work

included raising the cabin so that its rotted sill logs could be replaced. The work crew constructed a new foundation and floor system and installed a new insulated roof. The site was then graded to enhance drainage and minimize future problems.

Rehabilitation work on two other historic buildings at park headquarters is currently in progress. Repair and rehabilitation of the Ranger Cache, completed in 1931 as a garage, has included lifting the building to construct a new concrete foundation and floor, and replacing rotted sill logs and log column ends. The interior is being updated with restroom facilities (the building had previously lacked these!) and new office space. The project will be completed in 2007. A complete interior rehabilitation of a residence constructed in the early 1950's is also in progress.



The Lower East Fork Cabin, before and after restoration.



The “Overthere” rehabilitation was completed in June 2006. The building has offices and working space for five permanent staff.

Archeological Sites

Long-Term Goal:

By September 30, 2008, thirteen (9%) of the 150 Denali National Park and Preserve archeological sites listed on the current archeological Sites Management System (ASMIS) with condition assessments, are in good condition.

By September 30, 2006, one of the 150 archeological sites listed on the current Archeological Sites Management Information System (ASMIS) with condition assessments, are in good condition.

STATUS: GOAL EXCEEDED

The two sites that make up the Teklanika Archeological District were brought into good condition through a stabilization project completed this year, exceeding the goal of getting one additional site into good condition. During the three year project the sites were evaluated. From the evaluation recommendations were made on how to stabilize the sites to prevent any further erosion. The stabilization included backfilling the evacuated areas with native materials and then revegetating the site. The evaluators also recommended that more interpretation be done of the sites.

A total of 64 sites are now in good condition.



Dr. Tony Fiorillo, of the Dallas Museum of Natural History, studies casts of theropod and hadrosaur dinosaur tracks on a rock outcropping above the Igloo Canyon.

Paleontological Sites

Long-Term Goal:

By September 30, 2008, 30% of the 284 listed paleontological localities known as of FY2004 in Denali National Park and Preserve are documented and condition assessments established. As of 2004, none of these sites have been inventoried by the National Park Service.

Annual Goal:

By September 30, 2006, twenty-four paleontological localities in Denali National Park and Preserve are documented and condition assessments established.

STATUS: GOAL EXCEEDED

The search for dinosaur material in the park continued with great success in the 2006 field season. Trace fossil sites were located in the Igloo Canyon and Double Mountain vicinities of the park. Over seventy new paleontological sites, or sites with fossil remains of

plants and animals, were documented. The new discoveries included twenty-four footprints of theropods, meat-eating dinosaurs that walked on their hind legs, and seven hadrosaur footprints. Hadrosaurs are commonly referred to as duck-billed dinosaurs. In addition, numerous bird tracks, one possible bird feather imprint, several suspected small mammal trackways, possible claw prints, numerous plant fossil impressions and other biological or trace fossil features were documented. Over 1,000 feet of rock layers of different types was measured, described and documented and several molds were made of the footprints.

Most of the summer's discoveries were made by trained geologists and graduate students, but some of the new finds took place during workshops for teachers and field trips for students in the local school district.

The original evaluation and documentation of the Teklanika River archeological site took place in 1961. This site was used by Native Americans approximately 5000-8000 years ago.

PRESERVE PARK RESOURCES

The National Park Service contributes to knowledge about natural and cultural resources and associated values; management decisions about visitors and resources are based on adequate scholarly and scientific information.

Resource Monitoring

Long-Term Goal:

By September 30, 2008, 100% of the identified natural resource datasets identified in the Resource Management Plan for Denali National Park and Preserve will be completed.

Annual Goal:

By September 30, 2006, fifty of fifty identified natural resource datasets identified in the Resource Management Plan will be completed.

STATUS: GOAL ACHIEVED

Some of major projects taking place in 2006 included research on the predator-prey dynamics between caribou and their predators and the dynamics of wolves and their prey, both done cooperatively with the USGS. The park's maintenance division staff continued monitoring the dust palliative application on the park road under the direction of the park's plant ecologist. The palliative is spread on approximately forty miles of the more heavily traveled portions of the park road. The dust reduces visibility and creates a safety hazard, and can be a health concern during periods without rain.

A second year of the extensive effort to document resource impacts from off-road vehicle (ORV) use in the new park additions near Cantwell was completed. Data from this study is being utilized to prepare the alternatives for an environmental assessment that is scheduled to be released for public comment in 2007.

This was the first year of implementing a landscape-scale vegetation monitoring program in the park. During the summer 165

permanent vegetation plots were installed and surveyed, from the lowlands west of Kantishna to the alpine ridges around Mount Healy. This field work likely represents the largest single-season effort in vegetation sampling in the park's history.

Surveillance sampling of arctic warblers for the H5N1 avian influenza took place in 2006 as part of a nationwide effort to monitor specific bird populations for the presence of the virus.

Global Positioning System or GPS has become a valuable tool for park managers in all disciplines. As receivers have become smaller, cheaper, and more precise, the number of units in use in the park has grown dramatically. An informal survey of GPS use within the park indicates that there are seventy-eight units in use by the



A recently banded arctic warbler.

Ron Teel, courtesy of the Alaska Bird Observatory



Backcountry ranger Nate Porter uses a handheld GPS unit during a patrol.

Visitor Protection, Resource Management, and Maintenance divisions. The park glaciologist uses survey-grade GPS to measure movements of glaciers within 0.1 meter. Biologists use GPS to document sample site and observation locations within 1-5 meters. The backcountry staff use small, recreation-grade, GPS units to document patrol routes, campsite locations, and for search and rescue. The Maintenance Division uses GPS to document infrastructure such as culvert locations and for laying out construction projects.

Park Road Study

A series of studies to examine the impacts of traffic volume and patterns on the Denali Park Road to vegetation, wildlife, physical resources and the visitor experience was begun in 2006. The goal of this multi-disciplinary project is to maintain the quality of the visitor experience and protect park resources in the face of increased demand for the park road experience. Since 1972 traffic on the park road beyond Mile 15 has been controlled and limited to primarily buses. An annual limit of 10,512 vehicles during the main visitor season was implemented with the completion of the park's General Management Plan in 1986.

A study of grizzly bears and Dall sheep utilizing GPS telemetry is intended to detect impacts of traffic on animal movements near the road. A social survey will study the expectations and experiences of park visitors and of experienced road users. A study of logistical and physical constraints on traffic will examine traffic congestion,



Maintaining a high quality experience for the greatest number of park visitors while preserving park resources remains a primary challenge for park managers. What limit will ensure road traffic has no negative impacts on wildlife and on high quality visitor experiences?

maintenance and construction needs, dust and noise levels, and other factors that constrain traffic. A comprehensive model of park road traffic will be developed to predict the effects of changes in traffic volume and timing. If research findings suggest that changes to the vehicle numbers and volume are feasible, alternatives would be developed and go through a public review process.

In order to have a full range of road traffic patterns for evaluating the movements of wildlife in relationship to the road, the NPS implemented a "Quiet Night" policy to have one night of minimal traffic on the park road between the Savage River and Wonder Lake throughout the summer. All road permit holders were asked to limit travel to only urgent or emergency traffic from 10:00 p.m. Sunday until 6:00 a.m. Monday. This "Quiet Night" policy will be continued in the summer of 2007.



In spring 2006 researchers placed GPS collars on twenty grizzly bears that were located within the road corridor area. The collars were programmed to calculate the position of the bear once every hour and to automatically fall off on September 20, 2006. Nineteen of the collars were retrieved and the data is being analyzed.



The poster session also featured a spectacular quilt made by the Denali Quilters. The thirty-some members of the guild worked for four years to design and sew the quilt, which was completed in 2006. Each piece of colored fabric represents a pixel of one of the twenty-three landcover types described for the park. The central quilt is surrounded by a border of blocks made up of close-up artistic representations of the landcover types.

Symposium participants had the opportunity to meet researchers and view posters on a variety of projects taking place in the park and in other areas of Alaska.

Alaska Park Science Symposium

More than 150 scientists, park managers, community members, students, and educators gathered at the Denali Visitor Center and the Murie Science and Learning Center (MSLC) for the 2006 Alaska Park Science Symposium that took place September 12-14. The Symposium is a bi-annual event, hosted by a different park each time. The theme of this year's Symposium, "Park Science in Central Alaska: Crossing Boundaries in a Changing Environment" focused on presentations given by scientists from a variety of disciplines who conducted research in Denali, Wrangell-St. Elias National Park, Yukon-Charley Rivers National Preserve and the adjacent lands and waters of Central Alaska and the Western Yukon.

Denali park staff played a key role, along with other Central Alaska Network parks and the Regional

Science Advisor, in organizing the Symposium, park logistics, and audiovisual needs (videotaping for later educational purposes, live streaming to the web).

The schedule included fifty presentations and thirty-five posters on topics including geology, monitoring a changing environment, landscape ecology, vertebrate ecology, profiles in history, educational strategies, evaluating the visitor experience and subsistence management. Symposium highlights included two plenary talks, "Alaskan National Parks in a Warming Climate" by Terry Chapin and "The Yukon Ice Patch Research Project" by Greg Hare. There was also a discussion by five panelists about "Landscape Change in Central Alaska", and a synthesis talk entitled "What Do We Know and Where Do We Go From Here?" The conference was broadcast live over the Internet, allowing people from all over the country to view sessions in real time. A published Symposium Proceedings is planned in the coming year.

The symposium was the starting point for Denali's Resource Stewardship Strategy planning process. Denali will be the Alaska Region's prototype park for developing these plans. The strategy will ensure that important park values are maintained, including intact biological systems, wildlife, glaciers, historic sites, visitor experience and many other important resources and values. The resulting document will guide research and resource management activities in the park for the next 15-20 years.



PROVIDE FOR THE PUBLIC ENJOYMENT AND VISITOR EXPERIENCE

Visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and the quality of park facilities, services, and appropriate recreational opportunities.



Children from the local communities participate in "Denali Discovery Camp", a week-long outdoor learning experience in the park sponsored by the Denali Education Center in partnership with the National Park Service.

Park visitors can enjoy outdoor dining at the Morino Grill, conveniently located near the Denali Visitor Center and Alaska Railroad Depot.

Visitor Facilities and Services

Long-Term Goal:

By September 30, 2008, 88% of visitors to Denali National Park are satisfied with appropriate park facilities, services, and recreational opportunities.

Annual Goal:

By September 30, 2006, 85% of park visitors are satisfied with appropriate park facilities, services, and recreational opportunities.

STATUS: GOAL EXCEEDED

The first full season of operations for the facilities in the Denali Visitor Center complex proved to be a very much appreciated improvement to the visitor's park experience. Visitor satisfaction increased from 95% in 2005 to 98% in 2006. The Denali Visitor Center, coupled with the Murie Science and Learning Center, provides visitors with the opportunity for self discovery and deeper learning.

National Park Service and park partner staff, including the Alaska Natural History Institutes, Doyon/ARAMARK Joint Venture, Denali Borough School District, and the Denali Education Center, all actively encouraged visitors to engage in ranger programs and educational

opportunities such as walks, talks, hikes, and demonstrations that enhanced the visitor experience. The completion of new trails, ranging in difficulty from easy to strenuous, in the vicinity of the new facilities increased opportunities for visitors to explore the park at their comfort level. Denali Visitor Center staff regularly received positive comments about the availability of food and drink within walking distance of the center. Visitor satisfaction with combined park facilities increased 3% over 2005 and satisfaction with the combined services increased 5%.

The climbing season in 2006 was typical, with 1,151 climbers registered for Mt. McKinley and an additional twenty-eight registered for Mt. Foraker. The majority of the visitation came from the United States (62% of all climbers). Other key nations contributing to this season's mountaineering totals included Canada, Japan, the United Kingdom, and Spain. Approximately 50% of the climbers who attempted Mt. McKinley, a total of 582, reached its 20,320 foot summit. No summits were recorded on Mt. Foraker.



Commercial Services

Long-Term Goal:

By September 30, 2008, 71% of park visitors are satisfied with commercial services in the park (as measured by the Visitor Comment Survey card).

Annual Goal:

By September 30, 2006, 79% of park visitors are satisfied with commercial services in the park (as measured by the Visitor Comment Survey card).

STATUS: GOAL EXCEEDED

The results from a random survey of park visitors indicated that 87% of them were satisfied with the commercial services in the park, most of which are provided by the park's main concessioner, Doyon/ARAMARK Joint Venture (JV). These services include the Morino Grill, a food service facility in the Denali Visitor Center campus, the Riley Creek Mercantile camper convenience store at the entrance to the Riley Creek Campground, and the Wilderness Access Center (WAC), where visitors obtain campground and bus reservations. JV remodeled the interior of the WAC, adding new interpretive panels and a centrally located information desk to provide better service to visitors utilizing the facility.

Transportation services into the park were provided to approximately 287,000 visitors. This included 74,537 passengers on the Visitor Transportation System (VTS); 120,032 on the Tundra Wilderness Tour (TWT) and 76,256 on the Denali Natural History Tour (DNHT). The TWT experience was enhanced by the addition of twenty-two new buses equipped with video technology that allowed the driver/guide to use a video camera to focus on and zoom in on wildlife. This assisted visitors in locating

The Curry Ridge site for the new visitor center in Denali State Park has a spectacular view of Mount McKinley on clear days.



Tour and shuttle buses stop at the Polychrome Rest Area for a short break. Visitors can enjoy stunning views of the Plains of Murie and the Alaska Range, and walk a short trail located above the rest area.

animals and enhanced distant wildlife sightings. Buses used for the VTS were reconfigured with bucket seats, increasing capacity by four additional seats per bus. VTS use has declined about 9% since 2005, but the TWT and DNHT grew by 1% and 17% respectively.

New ten- year contracts were awarded to four glacier landing services, and prospectuses were released for guided sport hunting and guided interpretive services hiking. As part of the implementation of the Backcountry Management Plan, new limits and guidelines, primarily for air taxis, hiking and hunting guides, were integrated into the concession contracts and commercial use authorizations.



Major Planning Efforts Completed

The Record of Decision was signed in February 2006 for the completed Final Backcountry Management Plan and Environmental Impact Statement. This document is the culmination of nearly seven years of planning for the backcountry of the park, which makes up approximately 99% of the total area. The plan amends and updates the 1986 General Management Plan and guides managers for the next 15-20 years on topics such as airplane landings, snow-machine use, and commercial activities. It will provide for growth in visitor use and additional visitor opportunities in the backcountry of the park.

The final South Denali Implementation Plan and Environmental Impact Statement was released in April 2006, representing the culmination of more than thirteen years of cooperative planning by the National Park Service, State of Alaska and Matanuska-Susitna Borough. The Curry Ridge in Denali State Park was chosen for the site of a new visitor center, which will provide a focal point for a variety of activities in the state park and Denali National Park. The plan also provides for new recreational opportunities in the South Denali region as a whole, including areas along the Parks Highway south of Denali State Park and the Petersville Road near Trapper Creek. The Record of Decision was signed in June 2006.

Visitor Understanding

Long-Term Goal:

By September 30, 2008, 80% of Denali National Park visitors understand and appreciate the significance of the park.

Annual Goal:

By September 30, 2006, 80% of Denali National Park visitors understand and appreciate the significance of the park.

STATUS: GOAL EXCEEDED

The responses provided by 92% of the visitors to a survey showed that they understood why Denali is significant as a park. The new Denali Visitor Center facilities provide numerous opportunities for visitors to learn more the park's significance, through self-discovery or the numerous ranger-led activities. Along with the traditional complement of walks, talks, hikes, campground programs and demonstrations, several

new informal and formal programs (topographic model discussions, exhibit roves, the Meadow View hike) were given with good success. Many educational programs were offered through the Murie Science and Learning Center (MSLC), and a new Education Specialist rejuvenated the program in southside communities.

Several enhancements in the park's information technology structure enhanced visitor education opportunities. These improvements included: expansion of the MSLC guest network into the Denali Visitor Center, significantly increasing the number of computer ports in the MSLC, installation of kiosk machines providing information to visitors at the DVC and MSLC on the Central Alaska Network Inventory and Monitoring program, and technical support for the monitoring camera located near Wonder Lake that provides information on air quality and mountain visibility for the park's website.



NPS wildlife biologist Pat Owen does an activity on wildlife monitoring with students participating in Denali Discovery Camp, one of the many educational programs offered through the Murie Science and Learning Center.



Winter kennels volunteer Trish Rodriguez relaxing in the Wonder Lake Ranger Station after a hard day out on the trail. She, another volunteer and the assistant kennels manager mushed three teams of the park's sled dogs from headquarters to Wonder Lake and back during the annual winter patrol of the central part of the park.

Volunteers in the Park

The park's core functions, those most relevant to the park mission, continue to benefit from the use of volunteers. A total of 39,253 hours were donated by 324 volunteers in 2006, an increase over the 35,757 hours contributed in 2005. The number of volunteers was down slightly from the 357 in 2005. In 2006 there was also an increase in the diversity of the activities in which volunteers participated.

The traditional operations such as winter kennels, campground hosts, visitor contact stations, and mountaineering patrols maintained their use of volunteers. The rescue and resource management aspects of the mountaineering operation were enhanced by the efforts of thirty-eight mountaineering volunteers, who

contributed a total of 7,300 hours to the patrols. Over 5,300 hours were contributed at the kennels, including the two winter volunteers, one summer intern, and approximately sixty summer dog walkers.

The Administrative Division and the park's safety office utilized volunteers to augment their respective programs. The Denali School Borough and the Student Conservation Association provided sixty-six volunteers who ultimately contributed over a third of the park's total volunteer hours. Accomplishments for the 2006 season include the construction of two seasonal quarters and a greenhouse for the seasonal housing area; construction of several trails in the park's entrance area, removal of 1,000 pounds of non-native plants and involvement in an extensive visitor survey.

ENSURE ORGANIZATIONAL EFFECTIVENESS

The National Park Service uses current management practices, systems, and technologies to accomplish its mission.

Trail crew members remove small trees and other vegetation during the Triple Lakes Trail re-construction.



Upgrades of Trails and Other Assets

Long-Term Goal:

By September 30, 2008, 85% of 273 other non-historic facility assets are in fair to good condition as measured by the Facility Condition Index (FCI)

Annual Goal:

By September 30, 2006, 223 (82%) of 273 other non-historic facility assets are in fair to good condition as measured by the Facility Condition Index (FCI)

STATUS: GOAL ACHIEVED

Substantial trail work was completed on the Gorge Creek, Triple Lakes and Savage Alpine trails. The Gorge Creek Trail near the Eielson Visitor Center and the Savage Alpine Trail above the Savage River Rest stop are essentially new trails, although they follow rough social trails that developed due to repeated hiker use. The Triple Lakes Trail was constructed during the summers of 1941 to 1944, but had deteriorated over the years due to lack of regular maintenance. Other improvements included the replacement of the benches in the Savage River Campground amphitheater.

Mats of tundra vegetation were removed from the area around the Eielson Visitor Center prior to beginning construction this summer. They are being stored to rehabilitate the landscape vegetation around the Eielson Visitor Center when the building is completed. Without the intervening rehabilitation, the native alpine vegetation may not be able to re-establish itself due to the short growing season at that elevation (3,733 feet) and the high impacts of visitation at the site.

The interiors of Buildings 12 and 13 were completely rehabbed, including new windows, appliances, and light fixtures.

Employee Housing Upgrades

Long-Term Goal:

By September 30, 2008, 38% of the 99 employee housing units are in fair to good condition, as measured by the FCI at Denali.

Annual Goal:

By September 30, 2006, 31% of 99 employee housing units are in good to fair condition as measured by the FCI.

STATUS: GOAL ACHIEVED

The National Park Service (NPS) and the Denali Borough School District work together in a School-to-Work program that supports Tri-Valley students in Healy participating in a building trades class. During the 2005-2006 school year high school students constructed two eighteen by twenty-four foot cabins using materials and supervision provided by the NPS. They are constructed of materials for high energy efficiency, including triple-pane glass in the windows, insulated doors and energy efficient lights and appliances. These cabins replaced poorly constructed, very energy-inefficient cabins that were twenty years old.

Two two-story structures originally built by the Civilian Conservation Corps in the late 1930s were completely rehabilitated. The interior in both buildings was completely replaced, and new plumbing, wiring, arctic entries, steps, and decks were installed. Each contains two one-bedroom apartments that are used for housing permanent employees.



ENSURE ORGANIZATIONAL EFFECTIVENESS

The National Park Service increases its managerial resources through initiatives and support from other agencies, organizations and individuals.

Denali Partnerships

Long-Term Goal:

By September 30, 2008, Denali will initiate one additional community partnership designed to enhance its ability to manage recreational and/or educational activities seamlessly.

Annual Goal:

By September 30, 2006, Denali will initiate one additional community partnership designed to enhance its ability to manage recreational and/or education activities seamlessly.

STATUS: GOAL EXCEEDED

Two new interpretive partnerships were formalized with Holland America Tours and Princess Hotels, Inc. The National Park Service provides an interpretive program, once a day, seven days a week, for both partners from early June through Labor Day weekend. Programs may be a walk along the nature path of the hotel, informal discussions, or formal presentations and are up to an hour in length. Attendance at the programs averaged sixteen guests.

National Park Service interpreter Jo Anne Blankenship presents a program on bears for guests at the McKinley Chalet Resorts.



Chris Arend, courtesy of ARAMARK

Expenditure Highlights from All Funding Sources

\$3,196,100 - Resource Protection and Management

Staff completed a comprehensive document describing the results of the off-road vehicle (ORV) inventory project for which the field work was completed in 2005. Park staff also wrote and prepared the vegetation and wetlands sections for the Cantwell Traditional Use ORV Environmental Assessment document, which is expected to be released for public comment in spring 2007.

Soundscape monitoring data was collected from sound stations located on Healy Ridge, Muldrow Glacier, Caribou Creek, the toe of the Ruth Glacier, West Fork of the Yentna River, and at Foggy Pass. This was the first year of a regionally funded project to develop an effective sample design for monitoring soundscapes in large Alaskan parks.

The Western Area Fire Management Program continued the implementation of the frontcountry hazard fuels treatment program by removing trees, shrubs and other vegetation that was in close proximity to buildings at the Toklat Road Camp, a seasonal housing area located 53 miles into the park. An additional 1.5 acres of fuels were treated adjacent to backcountry cabin sites.

\$4,335,100 - Visitor Services

Work continues on the construction and planning the exhibits for the new Eielson Visitor Center, which is scheduled to open in 2008.

2006 was the fifth year of the Artist-in-Residence program at Denali. Four artists

using very different mediums were selected from over fifty applicants for the program. They included a wildlife artist who works with oil paints, a fabric artist known internationally for her spectacular quilts, a wood sculptor, and a printmaker who creates prints using foam plates indented with pens, pointed tools or textured objects.

A total of 6,885 road lottery applications were received this year, the highest number since an application fee was implemented in 2004. Good weather conditions prevailed, and the road was open for its entire length for the weekend, allowing visitors in 1,347 vehicles to travel through and enjoy the park.

With the operation of the Murie Science and Learning Center as a winter visitor center, over one hundred visitors participated in the weekend snowshoe walks that were offered on a regular basis during the winter.

\$9,543,200 - Facility Operations and Maintenance

Maintenance staff secured funding for, planned and implemented a budget containing thirty-five separate accounts, in addition to the base ONPS funds. The park recycled 129,158 pounds (64.5 tons) of material, which included 65,000 pounds of metal (scrap, aluminum, copper and brass); 48,000 pounds of paper (cardboard and office paper); 1,000 pounds of plastic; 2,364 pounds of electronics (computers, printers, fax machines; 196 pounds of used toner cartridges and batteries, oil and fluorescent tubes. The auto shop recovered and reused 990 gallons of used engine oil

as heating fuel for the fleet maintenance shops. The park continued testing of the bio-based fish oil in partnership with the University of Alaska Fairbanks and the Alaska Department of Environmental Conservation.

The draft road design standards are now under review, a project that has been underway for several years. When complete, the document will provide guidance on the future maintenance and design of the park road.

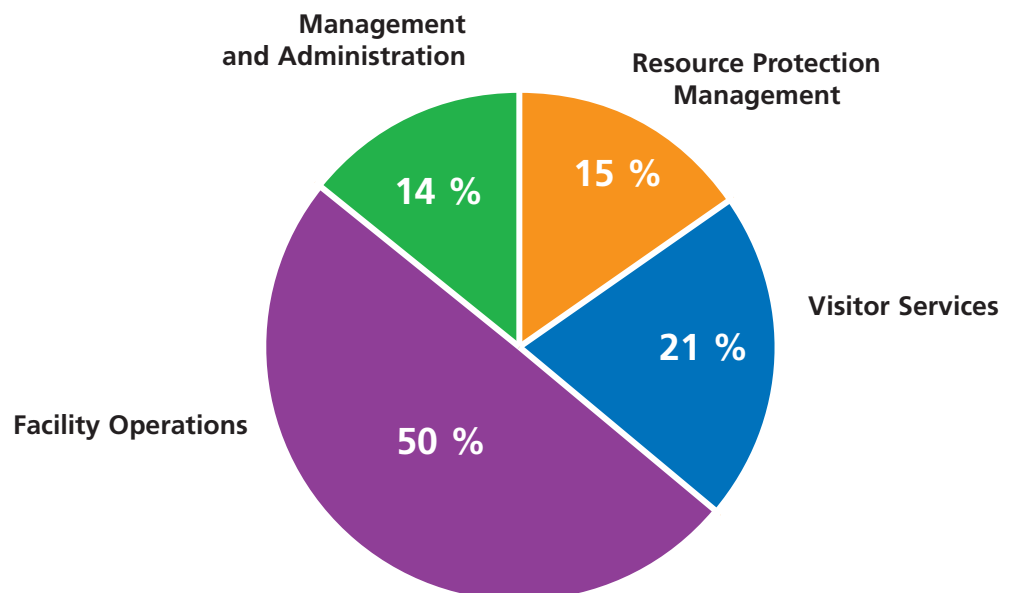
\$3,633,900 - Management and Administration

The park embarked on the Core Operations Analysis (CORE) process to create an awareness of new operating realities being faced by management due to the erosion and shortfalls in the park's budget. Supervisors and employees were integrated into the process to analyze tasks and activities, determining those that are core to the park's and National Park Service missions. Staff identified operational efficiencies, determined attrition rates and programs to be discontinued, and identified potential revenue stream enhancements. The Budget Cost Projection (BCP) contains the organizational and operational efficiencies that could be implemented immediately. The BCP identifies the budget shortfall that the park would be faced with if any of the efficiencies or new revenue streams identified in the CORE process are not implemented.

FY 2006 Financial Summary

	All Funding Sources	ONPS Funding Only
Resource Protection Management		
Natural resource management	2,704,400	1,041,600
Cultural resources & subsistence	491,700	303,000
	\$3,196,100	\$1,344,600
Visitor Services		
Interpretation	1,414,900	719,700
Rangers	2,553,700	2,071,300
Concessions	366,600	238,600
	\$4,335,200	\$3,029,600
Facility Operations		
Maintenance	10,291,800	3,287,000
	\$10,291,800	\$3,287,000
Management & Administration		
Superintendent's Office	861,500	795,100
Planning	507,200	364,500
Administration	1,517,100	1,490,100
	\$2,885,800	\$2,649,700
TOTAL	\$20,708,900	\$10,310,900

All Funding Sources





First Lady Laura Bush and two childhood friends visited the park in late July, continuing the First Lady's annual tradition of visiting national parks with some or all of a group of women who have known each other since grade school. The First Lady and her party were guests at Camp Denali for five days. The National Park Service and its partners hosted a luncheon for the First Lady and her friends at the end of her visit.

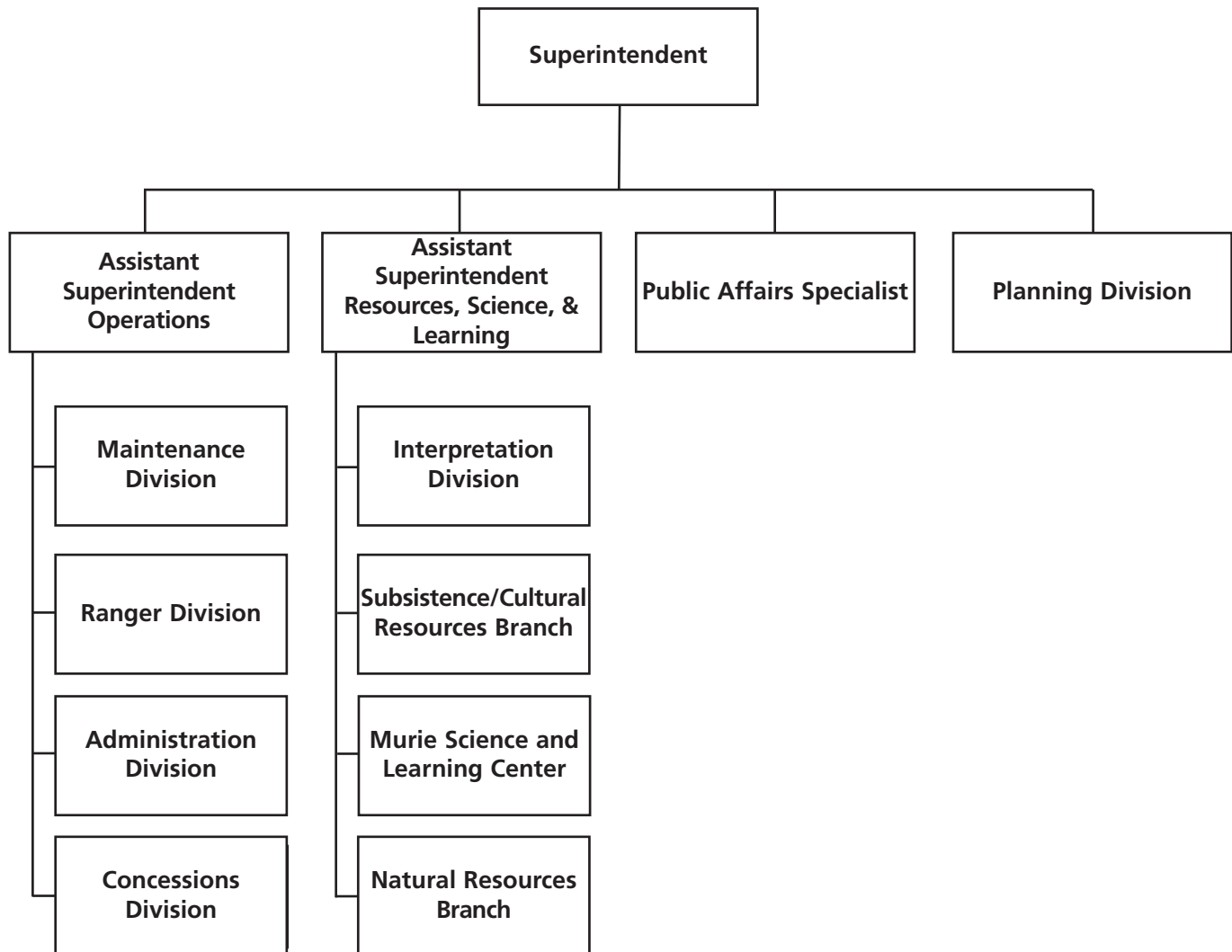


The Special Projects crew consisting of Eric Newton, Jean Balay, Chip Barker, and Seth Clark worked for three weeks on the Lower East Fork Cabin rehabilitation.



Park ranger-interpreter Mark Motsko and his Discovery Hike participants on Polychrome Mountain.

Denali National Park and Preserve Organization Chart





When you think of
Denali, picture it
at the **center**, not
the edge. It receives the
whole world
and sends
ambassadors
around the globe.

